

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE ENGINEER, MS 43
1727 30TH STREET
P.O. BOX 168041
SACRAMENTO, CA 95816-8041
FAX (916) 227-6214
TTY (916) 227-8454



Flex your power!
Be energy efficient!

**** WARNING ** WARNING ** WARNING ** WARNING ****
This document is intended for informational purposes only.

Users are cautioned that California Department of Transportation (Department) does not assume any liability or responsibility based on these electronic files or for any defective or incomplete copying, excerpting, scanning, faxing or downloading of the contract documents. As always, for the official paper versions of the bidders packages and non-bidder packages, including addenda write to the California Department of Transportation, Plans and Bid Documents, Room 0200, P.O. Box 942874, Sacramento, CA 94272-0001, telephone (916) 654-4490 or fax (916) 654-7028. Office hours are 7:30 a.m. to 4:15 p.m. When ordering bidder or non-bidder packages it is important that you include a telephone number and fax number, P.O. Box and street address so that you can receive addenda.

May 9, 2006

08-SBd-15, 215-20.1/R29.2,28.2/28.6
08-0A4234

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in SAN BERNARDINO COUNTY IN AND NEAR RIALTO AND FONTANA ON ROUTE 15 FROM 0.5 KM SOUTH OF SIERRA AVENUE UNDERCROSSING TO 5.0 KM NORTH OF KENWOOD AVENUE UNDERCROSSING AND ON ROUTE 215 FROM 0.4 KM SOUTH OF ROUTE 15 TO ROUTE 15.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on May 18, 2006.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 4, 5, 11, 26, 27, 29, 30, 54, 104, and 188 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

In the Special Provisions, Section 6-1.01, "INCENTIVE AND DISINCENTIVE FOR COMPLETION OF WORK," Subsection, "INCENTIVES AND DISINCENTIVE," Subparagraphs B and E are revised as follows:

"B. In addition to the incentives described in Paragraph A above, the Contractor will receive an incentive of \$5,000 per full lane-hour for each partially opened extended weekend closure provided during the allowable time duration specified in Lane Closure Charts 3, 5 through 9 and 11 in Section 10-1.16 Maintaining Traffic of these special provisions. The maximum total incentive received for partially opened extended weekend closures shall not exceed \$175,000. Where multiple lane closure charts are used for corresponding work within a specific stage or combined for other work, the combined lane closures shall be considered as one closure.

E. For each 15-minute period beyond the allowable time duration for an extended weekend closure as shown on Lane Closure Charts 3, 5 through 9 and 11 in Section 10-1.16 Maintaining Traffic of these special provisions, the Contractor will receive a deduction equal to the amount shown in Section 10-1.17 Closure Requirements and Conditions of these special provisions for each lane closed. Where multiple lane closure charts are used for corresponding work within a specific stage or combined for other work, the combined lane closures shall be considered as one closure."

08-SBd-15, 215-20.1/R29.2,28.2/28.6
08-0A4234

In the Special Provisions, Section 6-1.01, "INCENTIVE AND DISINCENTIVE FOR COMPLETION OF WORK," Subsection, "DESIGNATED PORTION OF WORK," the second sentence of the first paragraph is revised as follows:

"The allowable period of time for extended weekend closures is specified in lane closure charts 3, 5 through 9, and 11 of Section 10-1.16 Maintaining Traffic of these special provisions. No extended weekend closures will be allowed during stages not listed."

In the Special Provisions, Section 6-1.01, "INCENTIVE AND DISINCENTIVE FOR COMPLETION OF WORK," Subsection, "DESIGNATED PORTION OF WORK," in the Extended Weekend Closure (EWC) Summary table, the row for Stage 2A, Designated Portion of Work column, the sentence is revised as follows:

"Construction of all PCC lane replacements on southbound SBd-15 from Sta. 256+60 to Sta. 258+50 and from Sta. 260+30 to Sta. 262+30 as shown on the plans (except associated profile grinding, joint sealing and PCC bridge approach slabs)."

In the Special Provisions, Section 6-1.01, "INCENTIVE AND DISINCENTIVE FOR COMPLETION OF WORK," Subsection, "DESIGNATED PORTION OF WORK," in the Extended Weekend Closure (EWC) Summary table, the row for Stage 2C, Designated Portion of Work column the sentence is revised as follows:

"Construction of all PCC lane replacements on southbound SBd-15 from Sta. 262+90 (E-S Conn.) to Sta. 10229+40 as shown in the plans (except associated profile grinding and joint sealing work); and PCC gore replacement at the southbound SBd-15/215 junction."

In the Special Provisions, Section 10-1.16, "MAINTAINING TRAFFIC," Lane Closure Charts 1 through 25 are replaced with the attached Lane Closure Charts 1 through 25.

In the Special Provisions, Section 10-1.27, "EXISTING HIGHWAY FACILITIES," Subsection "RESET CONCRETE BARRIER (TYPE K)," the third paragraph is revised as follows:

"The contract price paid per meter for reset concrete barrier (Type K) shall include full compensation for removing concrete barrier (Type K) and bar reinforcing anchor pins, resetting, cleaning, prime coating, painting and reinstalling anchor pins, surface preparation needed prior to placement to provide a flat bearing surface, as well as furnishing and installing reflectors on concrete barrier (Type K) and no additional compensation will be allowed therefore."

In the Special Provisions, Section 10-1.41, "REPLACE CONCRETE PAVEMENT (PRECAST CONCRETE)," is deleted.

In the Special Provisions, Section 10-1.55, "COLUMN CASINGS," is revised as attached.

In the Proposal and Contract, the Engineer's Estimate Items 41, 54, and 61 are revised, and Item 60 is deleted as attached.

Addendum No. 2
Page 3
May 9, 2006

08-SBd-15, 215-20.1/R29.2,28.2/28.6
08-0A4234

To Proposal and Contract book holders:

Replace pages 5 and 6 of the Engineer's Estimate in the Proposal with the attached revised pages 5 and 6 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract, book holders to ensure that each receives it. A copy of this addendum is available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

Chart No.1																									
Multilane Lane Requirements																									
Location: SBd-15 KP R23.7/R29.2 (PM R14.7/R18.1) Stage 1																									
Northbound Route 15 from 0.4 km south of Kenwood Ave. UC to 0.3 km south of Cleghorn Creek Br. (Stage 1)																									
FROM HOUR TO HOUR	a.m.											p.m.													
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Wednesday	1	1	1	1	1	2	3															3	3	2	2
Thursday	1	1	1	1	1	2	3																3	3	2
Fridays	2	1	1	1	1	2	3																		3
Saturdays	2	2	1	1	1	2	3															3	3	3	2
Sundays	2	2	2	2	2	2	2	3	3													3	3	2	2
Legend:																									
1		One lane open in direction of travel																							
2		Two adjacent lanes open in direction of travel																							
3		Three adjacent lanes open in direction of travel																							
		No lane closure allowed																							
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									

Chart No. 2 Ramp Lane Requirements																									
Location: SBd-15 KP R23.8/R24.62 (PM R14.8/R 15.2) Stage 1 Northbound Route 15 Kenwood Ave. On and Off Ramps																									
FROM HOUR TO HOUR	a.m.											p.m.													
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Wednesdays	X	X	X	X	X	X	X	X														X	X	X	X
Thursdays	X	X	X	X	X	X	X	X															X	X	X
Fridays	X	X	X	X	X	X	X	X																	X
Saturdays	X	X	X	X	X	X	X	X														X	X	X	X
Sundays	X	X	X	X	X	X	X	X	X	X												X	X	X	X

Legend:

☒ **Ramp** may be closed

☐ No work that interferes with public traffic will be allowed

Remarks:

1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.

Chart No. 3 Multilane Lane Requirements																									
Location: SBd-15 KP R22.7/R24 (PM R14.1/R14.9) Stage 2A Southbound Route 15 from Kenwood Ave. UC to 0.3 km north of SB Route 15 Connector Split																									
from hour to hour	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	
Mondays through Thursdays	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Fridays	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3
Saturdays	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sundays	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Legend:																									
2	Two adjacent lanes open in direction of travel																								
3	Three adjacent lanes open in direction of travel																								
4	Four adjacent lanes open in direction of travel																								
	No lane closure allowed																								
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (s) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									
5. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans a maximum of two consecutive weekend closures are recommended.																									

Chart No. 4 Ramp Lane Requirements																									
Location: SBd-15 KP R23.8/R24.5 (PM R14.7/R15.2) Stages 2A, 2B, and 2C Southbound Route 15 Kenwood Ave. On and Off Ramps																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fridays	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Saturdays	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sundays	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Legend:																									
X	Ramp may be closed																								
	No work that interferes with public traffic will be allowed																								
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.																									
4. In interchanges, only one entrance ramp (and only in one direction) shall be closed at any time.																									
5. Closure of the Kenwood Avenue Southbound entrance and exit ramps shall not exceed 60 days.																									

Chart No. 5 Connector Lane Requirements																									
Location: SBd-215 KP 28.145 (PM 17.489) Stage 2B Northbound Route 215 to Southbound Route 15 Connector																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays																									
Tuesdays through Thursdays																									
Fridays											C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Saturdays	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Sundays	C	C	C	C	C	C	C	C	C	C	C	C	C												
Legend:																									
C Connector may be closed																									
No work that interferes with public traffic will be allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.																									
4. In interchanges, only one entrance ramp (and only in one direction) shall be closed at any time.																									
5. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions.																									
Based on stage construction plans a maximum of three weekend closures are recommended.																									

Chart No. 6 Multilane Lane Requirements																									
Location: SBd-15 KP R22.7/25.6 (PM R14.1/15.9) Stage 2B and 2C Southbound Route 15 from 0.8 km south of Kenwood Ave. Entrance-ramp to Cajon Creek Br.																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays																									
Fridays											F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Saturdays	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Sundays	F	F	F	F	F	F	F	F	F	F	F	F	F												
Legend:																									
F No lane open in direction of travel																									
No work that interferes with public traffic will be allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									
5. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans three extended weekend closures are recommended.																									
6. At least two lanes shall remain open on southbound SBd-15 to southbound Route 215 at all times during this closure.																									

Chart No. 7 Multilane Lane Requirements																									
Location: SBd-215 KP 27.88/28.57 (PM 17.32/17.75) and SBd-15-KP R22.2/R22.6 (PM R13.8/R14.0) Stage 2D, Southbound Route 15 Connector Split to 0.3 km south of Route 15/Route 215 Separation Br.																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays																									
Fridays																			F	F	F	F	F	F	F
Saturdays	F	F	F	F	F	F	F	F	F	F	F	F	F					F	F	F	F	F	F	F	
Sundays	F	F	F	F	F	F	F	F	F	F	F	F	F												
Legend:																									
F	No lane open in direction of travel																								
	No work that interferes with public traffic will be allowed																								
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									
5. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans two extended 20 hour weekend closures in one weekend are recommended.																									
6. All three lanes southbound Route 15 to southbound Route 15 connector shall remain open during this closure.																									

Chart No. 8 Multilane Lane Requirements																									
Location: SBd-215 KP 28.15/28.57 (PM 17.49/17.75) and SBd-15- KP R22.2/R22.4 (PM R13.8/R13.9) Stage 3A, NB from 0.3 km south of Route 15/Route 215 Separation Br. to NB Route 15 Connector merge																									
FROM HOUR TO HOUR	a.m.											p.m.													
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Monday	F	F	F																						
Fridays																							F	F	F
Saturday	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Sunday	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Legend: <div> <div>F</div> <div>No lanes open in direction of travel</div> </div> <div> <div></div> <div>No work that interferes with public traffic will be allowed</div> </div>																									
Remarks: 1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List. 2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions. 3. The length of each closure shall not exceed 3 kilometers. 4. In the same direction , consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed. 5. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans one extended 54 hour weekend closure is recommended. 6. At least two lanes shall remain open on Route 15 north of the Route 15 NB connector merge during this closure.																									

Chart No. 9 Multilane Lane Requirements																									
Location: SBd-15 KP R22.4/R24.1 (PM R13.9/R15) Stage 3A, NB Route 15 from NB Route 15 Connector merge to Kenwood Ave UC																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Monday	3	3	3																						
Fridays																						3	3	3	
Saturday	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sunday	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Legend:																									
<div>3</div> Three lanes open in direction of travel																									
<div></div> No work that interferes with public traffic will be allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction , consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									
5. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans one extended 54 hour weekend closure is recommended.																									

Chart No. 10 Connector Lane Requirements																									
Location: SBd-15 KP R22.4/25.9 (PM R13.9/16.1) Stage 3B Northbound Route 15 Connector																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays	C	C	C	C																					
Tuesdays through Fridays																									
Saturdays										C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Sundays	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Legend: <div>C</div> Connector may be closed <div></div> No work that interferes with public traffic will be allowed																									
Remarks: 1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List. 2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions. 3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously. 4. In interchanges, only one entrance ramp (and only in one direction) shall be closed at any time. 5. 1 extended 44 hr. weekend closure shall be allowed. 6. At least two lanes shall remain open on Route 15 north of the Route 15 northbound connector merge during this closure.																									

Chart No. 11 Multilane Lane Requirements																									
Location: SBd-15 KP R22.4/R24.1 (PM R13.9/R15) Stage 3B Northbound Route 15 from Northbound Route 15 Connector merge to Kenwood Ave UC																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Monday	2	2	2	2																					
Fridays																									
Saturday										2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sunday	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Legend: <div>2</div> Two lanes open in direction of travel <div></div> No work that interferes with public traffic will be allowed																									
Remarks: 1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List. 2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions. 3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously. 4. In interchanges, only one entrance ramp (and only in one direction) shall be closed at any time. 5. 1 extended 44 hr. weekend closure shall be allowed. 6. At least two lanes must remain open on Route 15 north of the Route 15 northbound connector merge during this closure.																									

Chart No. 12 Ramp Lane Requirements																									
Location: SBd-215 KP 27.77 (PM R 17.253) Stage 3B Devore Southbound Exit Ramp																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays	X	X	X	X																					
Tuesdays through Fridays																									
Saturdays									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sundays	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Legend:

☒ **Ramp** may be closed

☐ No work that interferes with public traffic will be allowed

Remarks:

1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.
4. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans a maximum of one 44 hour extended weekend closure is recommended.

Chart No. 13 Multilane Lane Requirements																									
Location: SBd-15 KP 20.1/21.7 (PM 12.5/13.5) Southbound Route 15 Lytle Creek Bridge Railing Replacement (Phase 1)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	
Fridays	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Saturdays	2	2	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	
Sundays	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	
Legend:																									
<div><div>3</div>Three adjacent lanes open in direction of travel</div>																									
<div><div>2</div>Two adjacent lanes open in direction of travel</div>																									
<div><div>1</div>One lane open in direction of travel</div>																									
<div><div></div>No lane closure allowed</div>																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									
5. Maximum number of days allowed for full closure of one lane is 60.																									

Chart No. 14 Multilane Lane Requirements																									
Location: SBd-15 KP 20.1/21.7 (PM 12.5/13.5) Northbound Route 15 Lytle Creek Bridge Railing Replacement (Phase 2)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	
Fridays	2	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Saturdays	2	2	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	
Sundays	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	
Legend: <div> <div>3</div> Three adjacent lanes open in direction of travel </div> <div> <div>2</div> Two adjacent lanes open in direction of travel </div> <div> <div>1</div> One lane open in direction of travel </div> <div> <div></div> No lane closure allowed </div>																									
Remarks: 1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List. 2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions. 3. The length of each closure shall not exceed 3 kilometers. 4. In the same direction , consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed. 5. Maximum number of days allowed for full closure of one lane is 60 days.																									

Chart No. 15 Multilane Lane Requirements																									
Location: SBd-15 KP 20.1/R22.5 (PM 12.5/R14) General Route 15 Closures Southbound Route 15 Connector Split to Sierra Ave. UC																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays																				1	1	1	1	1	1
Tuesdays through Thursdays	1	1	1	1															1	1	1	1	1	1	
Fridays	1	1	1	1																					
Saturdays																									
Sundays																									
Legend:																									
<div><div>1</div>One lane open in direction of travel</div>																									
<div><div></div>No lane closure allowed</div>																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									

Chart No. 16 Ramp Lane Requirements																										
Location: SBd-15 KP 20.1/R22.4 (PM 12.5/R14) General Route15 Closures Southbound Glen Helen Pkwy. Interchange and Sierra Ave. Interchange On and Off Ramps																										
FROM HOUR TO HOUR	a.m.											p.m.														
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9		10	11	12
Mondays																					X	X	X	X	X	X
Tuesdays through Thursdays	X	X	X	X																	X	X	X	X	X	X
Fridays	X	X	X	X																						
Saturdays																										
Sundays																										

Legend:

☒ **Ramp** may be closed

☐ No work that interferes with public traffic will be allowed

Remarks:

1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.

Chart No. 17 Multilane Lane Requirements																									
Location: SBd-15 KP 20.1/R24.5 (PM 12.5/R15.2) General Route 15 Closures Northbound Route 15 from Sierra Ave. UC to Kenwood Ave. UC																									
FROM HOUR TO HOUR	a.m.											p.m.													
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays																						1	1	1	1
Tuesdays through Thursdays	1	1	1	1	1	1																1	1	1	1
Fridays	1	1	1	1	1	1																			
Saturdays and Sundays																									
Legend:																									
<div><div>1</div>One lane open in direction of travel</div>																									
<div><div></div>No lane closure allowed</div>																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									

Chart No. 18 Ramp Lane Requirements																										
Location: SBd-15 KP 20.1/R24.4 (PM 12.5/R15.2) Northbound- Sierra Ave., Glen Helen Parkway, and Kenwood Ave. Entrance and Exit Ramps (General Route 15 Closures)																										
FROM HOUR TO HOUR	a.m.											p.m.														
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Mondays																							X	X	X	X
Tuesdays through Thursdays	X	X	X	X	X	X																	X	X	X	X
Fridays	X	X	X	X	X	X																				
Saturdays and Sundays																										

Legend:

☒ Ramp may be closed

☐ No work that interferes with public traffic will be allowed

Remarks:

1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.

2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.

3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.

4. In interchanges, only one entrance ramp shall be closed at any time.

5. **Approximately 24 nights of closure is anticipated.**

Chart No. 19 Multilane Lane Requirements																										
Location: SBd-15 KP R22/R24.5 (PM R13.7-R15.2) Southbound -From 0.5 km North of Kenwood UC to Southbound Route 15 Connector merge (General Route 15 Closures)																										
FROM HOUR TO HOUR	a.m.												p.m.													
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11		12
Mondays																			3	3	2	2	2	2	1	
Tuesdays through Thursdays	1	1	1	2	3	4													3	3	2	2	2	2	1	
Fridays	1	1	1	2	3	4															4	4	4	4	4	
Saturdays	4	4	4	4	4	4	4	4													4	4	4	4	4	
Sundays	4	4	4	4	4	4	4	4																		
Legend:																										
<div><div>1</div>One lane open in direction of travel</div>																										
<div><div>2</div>Two adjacent lanes open in direction of travel</div>																										
<div><div>3</div>Three adjacent lanes open in direction of travel</div>																										
<div><div>4</div>Four adjacent lanes open in direction of travel</div>																										
<div><div></div>No lane closure allowed</div>																										
Remarks:																										
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																										
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																										
3. The length of each closure shall not exceed 3 kilometers.																										
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																										

Chart No. 20 Multilane Lane Requirements																									
Location: SBd-15 KP R22.1/R22.9 (PM R13.7-R14.3)Southbound from Southbound Route 15 Connector Split to Route 15/Route 215 Separation (General Route 15 Closures)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	
Mondays through Thursdays	1	1	1	1	1																				
Fridays	1	1	1	1																					
Saturdays			1	1	1																				
Sundays			1	1	1	1	1																		
Legend:																									
1 One lane open in direction of travel																									
No lane closure allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									

Chart No. 21 Connector Lane Requirements																									
Location: SBd-15 KP 25.969 (PM 16.137) Northbound Route 15 to Southbound SBd-215 Connector (General Connector Closure)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays																							C	C	C
Tuesdays through Thursdays	C	C	C	C	C																		C	C	C
Fridays	C	C	C	C	C																				
Saturdays																									
Sundays																									
Legend:																									
<div>C</div> Connector may be closed																									
<div></div> No work that interferes with public traffic will be allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.																									
4. In interchanges, only one entrance ramp (and only in one direction) shall be closed at any time.																									
5. A maximum of 10 nights of closures are anticipated.																									

Chart No. 22 Connector Lane Requirements																									
Location: SBd-215 KP 28.145 (PM 17.489) Northbound (Northbound Route 215 to Southbound Route 15 Connector) (General Connector Closure)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays																						C	C	C	C
Tuesdays through Thursdays	C	C	C	C																		C	C	C	C
Fridays	C	C	C	C																					
Saturdays																									
Sundays																									
Legend:																									
<div>C</div> Connector may be closed																									
<div></div> No work that interferes with public traffic will be allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. No two consecutive (entrance or exit) ramps shall be closed in each direction simultaneously.																									
4. In interchanges, only one entrance ramp shall be closed at any time.																									

Chart No. 23 Multilane Lane Requirements																									
Location: SBd-215 KP 28.1/28.6 (PM 17.5-17.75) Northbound from 0.5 km south of Route 15/Route 215 Separation to Route 15/Route 215 Separation (General Route 215 Closures)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1																		1	1	1	1
Fridays	1	1	1	1																		1	1	1	1
Saturdays	1	1	1	1	1	1																1	1	1	1
Sundays	1	1	1	1	1	1	1	1														1	1	1	1
Legend:																									
<div><div>1</div>One lane open in direction of travel</div>																									
<div><div></div>No lane closure allowed</div>																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. Attention is directed to "Incentives and Disincentives for Completion of Work" in the special provisions. Based on stage construction plans one extended 44 hour weekend closure is recommended.																									

Chart No. 24 Multilane Lane Requirements																									
Location: SBd-215 KP 27.4/28.6 (PM 17.0/17.75) Southbound From Route 15/Route 215 Separation to 0.5 km South of Route 15/Route 215 Separation (General Route 215 Closures)																									
FROM HOUR TO HOUR	a.m.												p.m.												
	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Mondays through Thursdays	1	1	1	1																		1	1	1	1
Fridays	1	1	1	1																		1	1	1	1
Saturdays	1	1	1	1	1	1																1	1	1	1
Sundays	1	1	1	1	1	1	1	1														1	1	1	1
Legend:																									
1 One lane open in direction of travel																									
No lane closure allowed																									
Remarks:																									
1. Closures may not be allowed during certain upcoming special events. See Table Z and District 8 Special Events List.																									
2. The closure starts with the first cone down and ends with the last cone picked up. No closure sign (S) shall be exposed to traffic more than 30 minutes before or after a closure, except as otherwise indicated in the special provisions.																									
3. The length of each closure shall not exceed 3 kilometers.																									
4. In the same direction, consecutive closures shall be not less than 2 kilometers apart and lanes shall be closed on the same side of the roadbed.																									

10-1.55 COLUMN CASINGS

Column casings shall consist of cleaned and painted structural steel shells filled with grout as shown on the plans and conforming to the provisions in Section 55, "Steel Structures," of the Standard Specifications and these special provisions.

Attention is directed to "Welding Quality Control" of these special provisions.

For field welding of column casings, only visual inspection will be required, and the requirements of the second sentence of paragraph 3.13.2 and the first sentence of paragraph 3.13.3 of AWS D1.5 will not apply.

Structural steel for column casings shall conform to the requirements in ASTM Designation: A 36/A 36M, or, at the Contractor's option, ASTM Designation: A 709/A 709M, Grade 36.

Polyethylene shall have a compressive strength of at least 69 kPa at no more than 15 percent deflection determined in conformance with the requirements in ASTM Designation: D 3575, Test B. Polyethylene shall be bonded to the column using a suitable waterproof adhesive applied to the entire contact surface.

The spaces to be occupied by the column casing materials shall be cleared of plants and other materials prior to encasing the column.

Removed plants and other materials shall be disposed of outside the highway right of way in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

CLEAN AND PAINT COLUMN CASING

New metal surfaces, except where galvanized, shall be cleaned and painted in conformance with the provisions in Sections 59-2, "Painting Structural Steel," and 91, "Paint," of the Standard Specifications and these special provisions.

Prior to performing any painting or paint removal, the Contractor shall submit to the Engineer, in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, 3 copies of a separate Painting Quality Work Plan (PQWP) for each item of work for which painting or paint removal is to be performed. As a minimum, each PQWP shall include the following:

- A. The name of each Contractor or subcontractor to be used.
- B. One copy each of all current "SSPC: The Society for Protective Coatings" specifications or qualification procedures which are applicable to the painting or paint removal to be performed. These documents shall become the permanent property of the Department.
- C. A copy of the coating manufacturer's guidelines and recommendations for surface preparation, painting, drying, curing, handling, shipping, and storage of painted structural steel, including testing methods and maximum allowable levels for soluble salts.
- D. Proposed methods and equipment to be used for any paint application.
- E. Proof of each of any required certifications, SSPC-QP 1, SSPC-QP 3. Where SSPC-QP 3 certification is required, an enclosed shop facility shall be required. Certification of AISC Sophisticated Paint Endorsement Quality Program, P-1 Enclosed endorsement, will be considered equivalent to SSPC-QP 3.
 1. In lieu of certification in conformance with the requirements in SSPC-QP 1 for this project, the Contractor may submit written documentation showing conformance with the requirements in Section 3, "General Qualification Requirements," of SSPC-QP 1.
- F. Proposed methods to control environmental conditions in accordance with the manufacturer's recommendations and these special provisions.
- G. Proposed methods to protect the coating during curing, shipping, handling, and storage.
- H. Proposed rinse water collection plan.
- I. A detailed paint repair plan for the repair of damaged areas.
- J. Procedures for containing blast media and water during application of coatings and coating repair of erected steel.
- K. Examples of proposed daily reports for all testing to be performed, including type of testing, location, lot size, time, weather conditions, test personnel, and results.

Prior to submitting the PQWP, a pre-painting meeting between the Engineer, the Contractor, and a representative from each entity performing painting for this project shall be held to discuss the requirements for the PQWP.

The Contractor shall allow the Engineer 3 weeks to approve the PQWP submittal after a complete plan has been received. No painting or paint removal shall be performed until the PQWP for that work is approved by the Engineer. Should the Engineer fail to complete the review within this time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in approving the PQWP, the delay will be considered a right of way delay in conformance with the provisions in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Engineer's approval of the Contractor's PQWP shall not relieve the Contractor of any responsibility under the contract for the successful completion of the work in conformity with the requirements of the plans and specifications.

The Contractor shall provide enclosures to permit cleaning and painting during inclement weather. Provisions shall be made to control atmospheric conditions inside the enclosures within specified limits during cleaning and painting operations, drying to solvent insolubility, and throughout the curing period in accordance with the manufacturer's recommendations and these special provisions. Full compensation for providing and maintaining such enclosures shall be considered as included in the prices paid for the various contract items of work requiring cleaning and painting, and no additional compensation will be allowed therefor.

Fresh, potable water with a maximum chloride content of 75 mg/L and a maximum sulfate content of 200 mg/L shall be used for water rinsing or pressure washing operations. No continuous recycling of rinse water will be permitted. If rinse water is collected into a tank and subsequent testing determines the collected water conforms to the specified requirements, reuse may be permitted by the Engineer if no collected water is added to the tank after sample collection for determination of conformance to specified requirements.

Column casing surfaces in contact with grout shall not be considered embedded in concrete.

Column casing surfaces to be painted with inorganic zinc coating shall be blast cleaned and painted with the single undercoat prior to shipment to the job site.

Cleaning

The surfaces to be cleaned and painted shall be dry blast cleaned in conformance with the requirements of SSPC-SP 10, "Near White Blast Cleaning," of the "SSPC: The Society for Protective Coatings." Blast cleaning shall leave surfaces with a dense, uniform, angular anchor pattern of not less than 40 μm nor more than 86 μm as measured in conformance with the requirements in ASTM Designation: D 4417.

Mineral and slag abrasives used for blast cleaning steel surfaces shall conform to the requirements for Class A, Grade 2 to 3 abrasives contained in SSPC-AB 1, "Mineral and Slag Abrasives," of the "SSPC: The Society for Protective Coatings," and shall not contain hazardous material.

Steel abrasives used for blast cleaning steel surfaces shall comply with the requirements of SSPC-AB 3, "Ferrous Metallic Abrasive," of the "SSPC: The Society for Protective Coatings." If steel abrasive is recycled through shop or field abrasive blast cleaning units, the recycled abrasive shall conform to the requirements of SSPC-AB 2, "Specification for Cleanliness of Recycled Ferrous Metallic Abrasive," of the "SSPC: The Society for Protective Coatings."

A Certificate of Compliance conforming to the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications and a Material Safety Data Sheet shall be furnished prior to use for each shipment of blast cleaning material for steel.

Abrasive blast cleaned surfaces shall be tested by the Contractor for soluble salts using a Class A or B retrieval method as described in Technology Guide 15, "Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Substrates," of the "SSPC: The Society for Protective Coatings," and cleaned so the maximum level of soluble salts does not exceed the lesser of the coating manufacturer's written recommendations or 10 micrograms per square centimeter. Areas of abrasive blast cleaned steel shall be tested at the rate of 3 tests for the first 100 square meters prepared per day, and one test for each additional 100 square meters or portion thereof, at locations selected by the Engineer. When less than 100 square meters of surface area is prepared in a shift, at least 2 tests shall be performed. If levels of soluble salts exceed the maximum allowed by these special provisions, the entire area represented by the testing will be rejected. The Contractor shall perform additional cleaning and testing of rejected areas until soluble salt levels conform to these requirements.

Corners shall be chamfered to remove sharp edges.

Thermal cut edges (TCEs) to be painted shall be conditioned before blast cleaning by shallow grinding or other method approved by the Engineer to remove the thin, hardened layer of material resulting from resolidification during cooling.

Visually evident base metal surface irregularities and defects shall be removed in accordance with ASTM Designation: A 6 or AASHTO Designation: M 160 prior to blast cleaning steel. When material defects exposed by blast cleaning are removed, the blast profile shall be restored by either blast cleaning or by using mechanical tools in accordance with SSPC-SP 11, "Power Tool Cleaning to Bare Metal," of the "SSPC: The Society for Protective Coatings."

Painting

Blast cleaned surfaces shall receive a single undercoat, and a final coat where specified, consisting of an inorganic zinc coating conforming to the requirements in AASHTO Designation: M 300, Type I or Type II, except that: 1) the first 3 sentences of Section 5.6, "Primer Field Performance Requirements," shall not apply for Type II coatings, and 2) the entire Section 4.7.1 shall not apply for either type of inorganic zinc coating.

The color of the final coat of inorganic zinc coating shall match Federal Standard 595B No. 36373.

If the Contractor proposes to use a Type I coating, the Contractor shall furnish to the Engineer for review documentation as required in Section 5.6 of AASHTO Designation: M 300. The Contractor shall allow the Engineer 4 weeks to review the proposal.

If the Contractor proposes to use a Type II coating, the coating shall be selected from the qualified products list, which may be obtained from the Transportation Laboratory.

Inorganic zinc coating shall be used within 12 hours of initial mixing.

Application of inorganic zinc coating shall conform to the provisions for applying zinc-rich coating in Section 59-2.13, "Application of Zinc-Rich Primer," of the Standard Specifications.

The single undercoat of inorganic zinc coating shall be applied to the required dry film thickness in 2 or more applications within 8 hours of the start of blast cleaning. Abrasive blast cleaned steel shall not be exposed to relative humidity exceeding 85 percent prior to application of inorganic zinc coating.

The total dry film thickness of all applications of the single undercoat of inorganic zinc coating shall be not less than 100 μm nor more than 200 μm .

Damaged areas and areas where mudcracking occurs in the inorganic zinc coating shall be blast cleaned and repainted with inorganic zinc coating to the specified thickness.

Steel surfaces coated with Type II inorganic zinc coating shall be protected from conditions that may cause the coating film to dissolve. The Contractor, at the Contractor's expense, shall repair areas where the coating has dissolved by blast cleaning and repainting with inorganic zinc coating to the specified thickness.

Dry spray, or overspray, as defined in the Steel Structures Painting Manual, Volume 1, "Good Painting Practice," of the "SSPC: The Society for Protective Coatings," shall be removed prior to application of subsequent coats or final acceptance. Removal of dry spray shall be by screening or other methods that minimize polishing of the inorganic zinc surface. The dry film thickness of the coating after removal of dry spray shall be in conformance with the provisions for applying the single undercoat, as specified herein.

The Contractor shall test the inorganic zinc coating prior to application of final coats. The locations of the tests will be determined by the Engineer. The Contractor shall determine the sequence of the testing operations. The testing for adhesion and hardness will be performed no sooner than 72 hours after application of the single undercoat of inorganic zinc coating. At the Contractor's expense, satisfactory access shall be provided to allow the Engineer to determine the location of the tests.

The inorganic zinc coating shall pass the following tests:

- A. The inorganic zinc coating shall have a minimum adhesion to steel of 4 MPa when measured using a self-aligning adhesion tester in conformance with the requirements in ASTM Designation: D 4541. The Engineer will select 3 locations per column casing section for adhesion testing. If 2 or more of the locations tested fail to meet adhesion requirements, the section will be rejected. If one of the locations tested fails to meet adhesion requirements, an additional 3 locations shall be tested. Should any of the additional locations fail to meet adhesion requirements, the column casing section will be rejected. The Contractor, at the Contractor's expense, shall repair the rejected area by blast cleaning and repainting with inorganic zinc to the specified thickness. Test locations for areas of inorganic zinc meeting adhesion testing requirements shall be repaired by application of organic zinc primer as specified in Section 91-1.04, "Materials," of the Standard Specifications to the specified minimum dry film thickness.
- B. Areas of inorganic zinc coating where finish coats are to be applied shall be tested by the Contractor for soluble salts using a Class A or B retrieval method as described in Technology Guide 15, "Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Substrates," of the "SSPC: The Society for Protective Coatings," and cleaned so the maximum level of soluble salts does not exceed the lesser of the manufacturer's written recommendations or 10 micrograms per square centimeter. Areas of inorganic zinc coating shall be tested at the rate of 3 tests for the first 100 square meters to be painted per day and one test for each additional 100 square meters or portion thereof at locations selected by the Engineer. When less than 100 square meters of surface area is painted in a shift, at least 2 tests shall be performed. If levels of soluble salts exceed the maximum allowed by these special provisions, the entire area represented by the testing will be rejected. The Contractor shall perform additional cleaning and testing of rejected areas until soluble salt levels conform to these requirements.
- C. Prior to application of final coats, the inorganic zinc coating shall exhibit a solid, hard, and polished metal surface when firmly scraped with the knurled edge of a quarter. Inorganic zinc coating that is powdery, soft, or does not exhibit a polished metal surface, as determined by the Engineer, shall be repaired by the Contractor, at the Contractor's expense, by blast cleaning and repainting with inorganic zinc coating to the specified thickness.

Additional Requirements for Water Borne Inorganic Zinc Primers

- A. The surface pH of the inorganic zinc primer shall be tested by wetting the surface with de-ionized water for a minimum of 15 minutes but no longer than 30 minutes and applying pH paper with a capability of measuring in increments of 0.5 pH units. At least 2 surface pH readings shall be taken for every 50 square meters or portion thereof. If less than 50 square meters of steel is coated in a single shift or day, at least 2 surface pH readings shall be taken for primer applied during that period. Application of finish coats will not be permitted until the surface pH is less than or equal to 7.
- B. Dry to solvent insolubility for water borne inorganic zinc primers shall be determined in conformance with the requirements in ASTM Designation: D 4752, except that water shall be the solvent. The resistance rating shall be not less than 4. Areas of inorganic zinc coating shall be tested for solvent insolubility at the rate of one test per 50 square meters or portion thereof. Inorganic zinc coating represented by the tested area that does not meet the solvent insolubility requirements will be rejected. The Contractor, at the Contractor's expense, shall repair rejected areas by blast cleaning and repainting with inorganic zinc coating to the specified thickness.

Additional Requirements for Solvent Borne Inorganic Zinc Primers

- A. Dry to solvent insolubility for solvent borne inorganic zinc primers shall be determined in conformance with the requirements in ASTM Designation: D 4752. The resistance rating shall be not less than 4. Areas of inorganic zinc coating shall be tested for solvent insolubility at the rate of one test per 50 square meters or portion thereof. Inorganic zinc coating represented by the tested area that does not meet the solvent insolubility requirements will be rejected. The Contractor, at the Contractor's expense, shall repair rejected areas by blast cleaning and repainting with inorganic zinc coating to the specified thickness.
- B. Surface hardness of solvent borne inorganic zinc shall be a minimum 2H when measured in conformance with the requirements in ASTM Designation: D 3363. Areas of inorganic zinc coating shall be tested at the rate of one test per 50 square meters or portion thereof. Inorganic zinc coating that fails to meet the surface hardness requirements shall be repaired by the Contractor, at the Contractor's expense, by blast cleaning and repainting with inorganic zinc coating to the specified thickness.

The Contractor, at the Contractor's expense, shall retest all rejected areas of inorganic zinc coating after repairs have been completed.

Except as approved by the Engineer, a minimum curing time of 72 hours shall be allowed between application of inorganic zinc coating and water rinsing.

Exposed areas of inorganic zinc coating where finish coats are specified shall be thoroughly water rinsed.

The final coat of inorganic zinc coating shall be applied after testing and completion of all operations that may damage or discolor the steel surface, including correction of runs, sags, thin and excessively thick areas in the paint film, skips and holidays, dry spray, or areas of non-uniform appearance.

The area to receive the final coat of inorganic zinc coating shall be lightly roughened by abrasive blasting using an abrasive no larger than 600 μm mesh. Abrasive blasting shall remove no more than 15 μm of inorganic zinc. The surface to be lightly roughened shall be free from moisture, dust, grease or any deleterious material. The undercoated areas of column casing surfaces not receiving a final coat shall be protected from abrasive blast cleaning operations.

The final coat of inorganic zinc coating shall be applied to the required dry film thickness in one uniform application within 24 hours after light roughening. The dry film thickness of the final coat of inorganic zinc coating shall be not less than 25 μm nor more than 75 μm .

The total dry film thickness of all applications of the single undercoat and final coat of inorganic zinc coating shall be not less than 125 μm nor more than 275 μm .

Finish coats will not be required.

GROUTING

Grouting shall conform to the provisions in Section 50-1.09, "Bonding and Grouting," of the Standard Specifications and these special provisions.

The Contractor shall limit the height of each lift of grout to minimize undulations and displacements of the surface of the shell during grouting. Undulations in the shell surface, including undulations from fabrication and erection, shall not exceed 6 mm in 300 mm nor shall the total displacement from plan location exceed 50 mm at any point. At the Contractor's option, a bracing system or other means may be employed to restrain the casing within the specified tolerances. Except where shown on the plans, restraints shall not pass through the columns. The grout shall harden prior to placing the next lift of grout, unless a bracing system is used.

In addition to the above grout lift restrictions, the height of grout lifts for portions of column casings containing polyethylene shall not exceed 3 m.

Suitable external grout injection valves shall be installed for filling of the casings. The filling operation shall begin at the bottom of the casing. Spacing of the valves shall be such that the grout will fill the gap between the casing and the polyethylene or column.

Casings shall be sealed at the bottom. Grout shall be pumped into the casing such that the grout head is maintained uniformly around the column, and no visible evidence of water or air is ejected at the top of the grout. The grout at the casing top shall be covered with mortar and sloped to drain. Mortar shall conform to the provisions in Section 51-1.135, "Mortar," of the Standard Specifications.

Casings shall be positioned with spacers to center the casing around the existing column at the location shown on the plans. Spacers may be welded to the inside of the casing. Spacers shall not be used in areas occupied by the polyethylene.

Grout shall not be permitted to flow across shoulders or lanes occupied by public traffic, or to flow into gutters or other drainage facilities.

Clamps, valves, injection ports, lifting ears, and other accessories shall be completely removed not less than 24 hours after placing grout. Voids shall be filled with mortar and finished flush with the exterior surface of the casing.

MEASUREMENT AND PAYMENT

Column casings will be measured and paid for in conformance with the provisions in Section 55-4, "Measurement and Payment," of the Standard Specifications and these special provisions.

The contract price paid per kilogram for column casing shall include full compensation for furnishing all labor, materials (including polyethylene and adhesive), tools, equipment, and incidentals, and for doing all the work involved in column casings filled with grout, complete in place, including cleaning and painting of structural steel, and testing, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

ENGINEER'S ESTIMATE**08-0A4234**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	190101	ROADWAY EXCAVATION	M3	20 700		
42	190107	ROADWAY EXCAVATION (TYPE Y-1) (AERIALY DEPOSITED LEAD)	M3	430		
43	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	
44	190185	SHOULDER BACKING	M3	100		
45 (F)	192003	STRUCTURE EXCAVATION (BRIDGE)	M3	30		
46 (F)	193003	STRUCTURE BACKFILL (BRIDGE)	M3	26		
47	194001	DITCH EXCAVATION	M3	670		
48 (S)	203014	FIBER (EROSION CONTROL)	KG	16 200		
49 (S)	203045	PURE LIVE SEED (EROSION CONTROL)	KG	260		
50 (S)	203061	STABILIZING EMULSION (EROSION CONTROL)	KG	1280		
51	260201	CLASS 2 AGGREGATE BASE	M3	10 800		
52	260210	AGGREGATE BASE (APPROACH SLAB)	M3	193		
53	390102	ASPHALT CONCRETE (TYPE A)	TONN	31 500		
54	038672	ASPHALT CONCRETE BASE (TYPE C)	TONN	7110		
55	394002	PLACE ASPHALT CONCRETE (MISCELLANEOUS AREA)	M2	5100		
56	394048	PLACE ASPHALT CONCRETE DIKE (TYPE E)	M	2350		
57	394054	SHOULDER RUMBLE STRIP (AC, GROUND-IN INDENTATIONS)	M	11 100		
58	397001	ASPHALTIC EMULSION (PAINT BINDER)	TONN	57		
59	401082	SHOULDER RUMBLE STRIP (PCC, GROUND-IN INDENTATIONS)	M	14 700		
60	BLANK					

ENGINEER'S ESTIMATE**08-0A4234**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
61	401108	REPLACE CONCRETE PAVEMENT (RAPID STRENGTH CONCRETE)	M3	7640		
62	038674	SEAL PAVEMENT JOINT (SILICONE)	M	6130		
63	404094	SEAL LONGITUDINAL ISOLATION JOINT	M	3060		
64	420201	GRIND EXISTING CONCRETE PAVEMENT	M2	62 900		
65 (S)	490655	400 MM CAST-IN-DRILLED-HOLE CONCRETE PILING	M	24		
66 (S)	490665	1.8 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	26		
67 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	31		
68 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	M3	126		
69 (F)	510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	31		
70	510087	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	M3	1636		
71	040212	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R MODIFIED)	M3	250		
72	510800	PAVING NOTCH EXTENSION	M3	34		
73	511106	DRILL AND BOND DOWEL	M	8		
74 (S)	519117	JOINT SEAL (MR 30 MM)	M	368		
75 (S)	519125	JOINT SEAL ASSEMBLY (MR 70 MM)	M	21		
76 (S)	519142	JOINT SEAL (MR 40 MM)	M	386		
77 (S)	519144	JOINT SEAL (MR 50 MM)	M	174		
78 (S-F)	520102	BAR REINFORCING STEEL (BRIDGE)	KG	33 867		
79 (F)	540102	TREAT BRIDGE DECK	M2	39 750		
80	540109	FURNISH BRIDGE DECK TREATMENT MATERIAL (LOW ODOR)	L	16 210		